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<input type="checkbox"/>	L5	(l2 or l3) and origin of assembly	0
<input type="checkbox"/>	L4	(l2 or l3) and silenc\$	2
<input type="checkbox"/>	L3	satellite tobacco necrosis virus	31
<input type="checkbox"/>	L2	satellite tobacco mosaic virus	11
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L1	satellite tobacco mosaic virus	5

END OF SEARCH HISTORY

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* * * * * Welcome to STN International * * * * *

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NEWS	2		"Ask CAS" for self-help around the clock
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NEWS	4	OCT 28	KOREAPAT now available on STN
NEWS	5	NOV 30	PHAR reloaded with additional data
NEWS	6	DEC 01	LISA now available on STN
NEWS	7	DEC 09	12 databases to be removed from STN on December 31, 2004
NEWS	8	DEC 15	MEDLINE update schedule for December 2004
NEWS	9	DEC 17	ELCOM reloaded; updating to resume; current-awareness alerts (SDIs) affected
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NEWS	13	DEC 17	THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15	DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16	JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	18	FEB 10	STN Patent Forums to be held in March 2005
NEWS	19	FEB 16	STN User Update to be held in conjunction with the 229th ACS National Meeting on March 13, 2005
NEWS	20	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	21	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	22	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	23	MAR 02	GBFULL: New full-text patent database on STN
NEWS	24	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	25	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS EXPRESS			JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
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FILE 'HOME' ENTERED AT 13:49:09 ON 08 MAR 2005

=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

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SESSION

FULL ESTIMATED COST

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0.21

FILE 'STNGUIDE' ENTERED AT 13:49:13 ON 08 MAR 2005

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=> file agricola caplus biosis

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.06

0.27

FILE 'AGRICOLA' ENTERED AT 13:49:34 ON 08 MAR 2005

FILE 'CAPLUS' ENTERED AT 13:49:34 ON 08 MAR 2005

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FILE 'BIOSIS' ENTERED AT 13:49:34 ON 08 MAR 2005

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=> s satellite tobacco mosaic virus

L1 137 SATELLITE TOBACCO MOSAIC VIRUS

=> s l1 and origin of assembly

L2 0 L1 AND ORIGIN OF ASSEMBLY

=> s l1 and coat protein

L3 37 L1 AND COAT PROTEIN

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 18 DUP REM L3 (19 DUPLICATES REMOVED)

=> d 1-10 ti

L4 ANSWER 1 OF 18 AGRICOLA Compiled and distributed by the National
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of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 1

TI Molecular structures of viruses from Raman optical activity.

L4 ANSWER 2 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Stability of **Satellite Tobacco Mosaic**
Virus RNA cores and its implications for infectivity and
macromolecular assembly.

L4 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI Biophysical studies on the RNA cores of **satellite**
tobacco mosaic virus

L4 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

TI Heterogeneity in the 3'-terminal untranslated region of tobacco mild green
mosaic tobamoviruses from Nicotiana glauca resulting in variants with
three or six pseudoknots

- L4 ANSWER 5 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4
- TI Naturally occurring variants of **satellite tobacco mosaic virus**.
- L4 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
- TI Refined structure of **satellite tobacco mosaic virus** at 1.8 Å resolution
- L4 ANSWER 7 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 6
- TI Replication of wild-type and mutant clones of **satellite tobacco mosaic virus** in *Nicotiana benthamiana* protoplasts.
- L4 ANSWER 8 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- TI Efficient replication of mutants of **satellite tobacco mosaic virus** in *Nicotiana* protoplasts.
- L4 ANSWER 9 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- TI The structure of satellite panicum mosaic virus at 1.9 Å resolution.
- L4 ANSWER 10 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 7
- TI Structural comparison of the plant satellite viruses.

=> d 2 ab

- L4 ANSWER 2 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

=> d 2 so

- L4 ANSWER 2 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- SO Biophysical Journal, (January, 2002) Vol. 82, No. 1 Part 2, pp. 461a. print.
Meeting Info.: 46th Annual Meeting of the Biophysical Society. San Francisco, California, USA. February 23-27, 2002.
CODEN: BIOJAU. ISSN: 0006-3495.

=> d 7 ab

- L4 ANSWER 7 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 6
- AB RNA transcribed from cloned **satellite tobacco mosaic virus** (STMV) cDNA replicated in *Nicotiana benthamiana* protoplasts when co-inoculated with tobacco mild green mosaic virus (TMGMV) genomic RNA, but degraded when inoculated alone. STMV genomic RNA extracted from wild-type virions replicated in protoplasts when co-inoculated with TMGMV, tobacco mosaic virus (TMV) or tomato mosaic virus (ToMV). Transcripts from clones of two STMV **coat protein** (CP) mutants accumulated to the same level as wild-type transcripts in protoplasts when co-inoculated with TMGMV, whereas a third mutant accumulated to detectable levels in some, but not all, experiments. These results confirm that STMV RNA requires helper virus for replication, and that the helper specificity exhibited by cloned STMV reflects a specific requirement for the TMGMV replicase. It also demonstrates that

the low accumulation of STMV CP mutants observed previously in whole plants cannot be attributed to inefficient RNA replication.

=> d 11-18 ti

- L4 ANSWER 11 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 8
- TI Characterization of deletion and frameshift mutants of **satellite tobacco mosaic virus**.
- L4 ANSWER 12 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 9
- TI Similarities between the secondary structure of **satellite tobacco mosaic virus** and tobamovirus RNAs.
- L4 ANSWER 13 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 10
- TI Three-dimensional structure of **satellite tobacco mosaic virus** at 2.9 angstroms resolution.
- L4 ANSWER 14 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 11
- TI Double-helical RNA in **satellite tobacco mosaic virus**.
- L4 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Recombinant expression system based on **satellite tobacco mosaic virus**
- L4 ANSWER 16 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- TI THE COMPLETE NUCLEOTIDE SEQUENCE OF THE GENOMIC RNA OF THE TOBAMOVIRUS TOBACCO MILD GREEN MOSAIC VIRUS.
- L4 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Nucleotide sequence and translation of **satellite tobacco mosaic virus** RNA
- L4 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 12
- TI Analysis of the genome of satellite panicum mosaic virus

=> d 11 ab

- L4 ANSWER 11 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 8
- AB A series of frameshift and deletion mutations was created in the genome of **satellite tobacco mosaic virus** (STMV) by modifying full-length cDNA clones of the type strain, from which biologically active transcripts could be synthesized in vitro. Deletions and frameshift mutations in the 5' open reading frame had no effect compared to wild-type STMV, on RNA accumulation, systemic movement or the symptoms induced by STMV in *Nicotiana tabacum* co-inoculated with tobacco mild green mosaic tobamovirus (TMGMV). This implies that the protein encoded by this reading frame is not necessary for biological activity. Deletions and frameshift mutations in the **coat protein** open reading frame resulted in decreased accumulation of STMV RNA in *N.*

tabacum, although these mutants were still capable of systemic movement, presumably in a nonencapsidated or free RNA form. Furthermore, the mild symptoms induced in tobacco by co-inoculations of wild-type STMV/TMG MV or infection with TMGMV alone were altered to severe systemic necrosis when plants were co-inoculated with these STMV **coat protein** mutants and TMGMV. Mutants within the 3' untranslated region were much less able to accumulate in TMGMV-infected plants than was wild-type STMV, and under some growth conditions did not accumulate to detectable levels.

=> d 12 ab

L4 ANSWER 12 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 9

AB The secondary structure of **satellite tobacco mosaic virus** (STMV) RNA was predicted using computer simulations of RNA folding. The analogies of structural elements in the 3' end untranslated regions (3'-UTR) of tobamoviral RNAs were analysed. In addition to the tRNA-like structure and pseudoknot stalk, which are found in all known RNAs of tobamoviruses and STMV, another region of stable consecutive pseudoknots was predicted in the 3'-UTR of STMV RNA. A similar pattern of repeated structural units, containing pseudoknot stalks and parts of the tRNA-like structure, was also found in odontoglossum ringspot virus (ORSV) RNA 3'-UTR. The predictions on the structure are supported by sequence comparisons which point to an important functional role of 3' terminal pseudoknots in STMV RNA as well as in other tobamoviral RNAs. The possible participation of pseudoknotted structures in the interactions with **coat protein** in STMV is discussed.

=> d 15 ab

L4 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
AB A cDNA encoding a full-length copy of the RNA genome of **satellite tobacco mosaic virus** is cloned and characterized for use as a transformation vector for plants. The virus is systemic and needs a helper virus for replication and so can be used to introduce foreign DNA into a plant without being pathogenic. The genome was cloned as a cDNA by standard methods using defined oligonucleotide primers. The RNA was shown by in vitro translation to encode two peptides of mol. weight 6,800 and 17,500. A series of plasmid derivs. containing modified cDNAs were constructed and transcripts from these used in infectivity studies on tobacco plants with tobacco mosaic virus isolates as helpers. The transcripts tested produced infected plants and virions were recovered from these plants. Antisense transcripts were not infective.

=> d 15 so

L4 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2

=> d 15 pi

L4	ANSWER 15 OF 18	CAPLUS	COPYRIGHT 2005 ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 9012107	A1	19901018	WO 1990-US1738	19900402
	W: CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				

=> d 15 in

L4 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
IN Fitzmaurice, Leona Claire; Mirkov, Theodore Erik

=> d 17 ab

L4 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN

AB **Satellite tobacco mosaic virus**

(STMV) is a plant virus with a 17-nm icosahedral particle encapsidating a 0.3 + 106 Mr ssRNA genome that depends on tobamoviruses for its replication. The complete nucleotide sequence of STMV RNA deduced in the expts. described here was 1059 nucleotides in length. The efficiency of labeling viral RNA with [γ -32P]ATP using T4 polynucleotide kinase was not affected by treatment with tobacco acid pyrophosphatase and/or bacterial alkaline phosphatase, indicating that the majority of the 5' termini of encapsidated STMV RNAs were phosphorylated. The 240 3'-terminal nucleotides of STMV RNA and either tobacco mosaic virus (TMV) U1 RNA or TMV U2/U5 RNA had greater than 65% overall sequence similarity, with 2 nearly identical regions of 40 and 50 bases, resp. There were no other regions of sequence homol. with TMV RNA. The 19 5'-terminal nucleotides of STMV RNA had greater than 65% sequence similarity with the 16 5'-terminal nucleotides of brome mosaic virus RNA 3 and 50% sequence similarity with the 12 5'-terminal nucleotides of the Q strain of cucumber mosaic virus RNA 3. The first open reading frame (ORF) beginning at base 53 encoded a 6800 Mr protein that corresponded in size to a major in vitro translation product directed by STMV RNA. A second ORF, beginning at nucleotide 163, had the capacity to code for a protein that corresponded in size (17,500 Mr) to the other major in vitro translation product. The first 12 codons of this ORF corresponded to the sequence of the N-terminal amino acids of the capsid protein. Western blot anal. of the in vitro translation products revealed that the 17,500 Mr protein had the same electrophoretic mobility as the authentic capsid protein; it was also antigenically related to the capsid protein, but the 6800 Mr protein was not. Time course anal. of in vitro translation demonstrated that the 6800 Mr protein was synthesized at the same time as the capsid protein and did not arise by the proteolytic cleavage of a larger precursor polypeptide. These results suggest that the genome of STMV functioned as a polycistronic mRNA. It has not been determined if the 6800 Mr protein is synthesized in vivo. STMV RNA had untranslated regions of 52 and 418 nucleotides at its 5' and 3' termini, resp. Nonphosphorylated 5' termini, the degree of similarity to the 3' terminus of 2 of its helper viruses, the genome organization, and the ability to function as a polycistronic mRNA are unique features for the genome of this satellite virus.

=> d 17 so

L4 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
S0 Virology (1989), 170(1), 139-46
CODEN: VIRLAX; ISSN: 0042-6822

=> s satellite tobacco necrosis virus

L5 316 SATELLITE TOBACCO NECROSIS VIRUS

=> s l5 and vector

L6 14 L5 AND VECTOR

=> dup rem l6

PROCESSING COMPLETED FOR L6

L7 9 DUP REM L6 (5 DUPLICATES REMOVED)

=> d 1-9 ti

L7 ANSWER 1 OF 9 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Geminate structures of African cassava mosaic virus.

L7 ANSWER 2 OF 9 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI 1966-1996: Thirty years of virology.

L7 ANSWER 3 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1

TI Expression of tobacco necrosis virus open reading frames 1 and 2 is sufficient for the replication of satellite necrosis virus.

L7 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI Evidence that the requirements for ATP and wheat germ initiation factors 4A and 4F are affected by a region of **satellite tobacco necrosis virus** RNA that is 3' to the ribosomal binding site

L7 ANSWER 5 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3

TI **Satellite tobacco necrosis virus:**
a new **vector** in plant genetic engineering.

L7 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Synthesis of **satellite tobacco necrosis virus** (STNV) RNA-like transcripts in Escherichia coli

L7 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

TI The determination of the heavy-atom substitution sites in the **satellite tobacco necrosis virus**

L7 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Progress toward a low resolution structure of the **satellite tobacco necrosis virus**

L7 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Amino acid composition, antigenicity, and other characteristics of the satellite viruses of tobacco necrosis virus

=> d 3 ab

L7 ANSWER 3 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1

AB Tobacco necrosis virus (TNV) is a small icosahedral plant virus which is often associated with satellite viruses. The genomic RNA of TNV contains six open reading frames (ORFs), of which ORFs 1 and 2 are thought to encode the viral polymerase. We demonstrate that tobacco protoplasts transfected with a **vector** containing TNV ORFs 1 and 2 under the control of the cauliflower mosaic virus 35S promoter, as well as protoplasts derived from transgenic Nicotiana tabacum containing the same gene(s), support replication of **satellite tobacco necrosis virus** RNA.

=> d 3 so

L7 ANSWER 3 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1

SO Virology, Sept 10, 1995. Vol. 212, No. 1. p. 222-224
Publisher: Orlando, Fla. : Academic Press.
CODEN: VIRLAX; ISSN: 0042-6822

=> d 5 ab

L7 ANSWER 5 OF 9 AGRICOLA Compiled and distributed by the National
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(2005) on STN DUPLICATE 3

=> d 5 so

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of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 3

S0 Symbiosis, 1986. Vol. 2, No. 1/3. p. 35-41
Publisher: Philadelphia : Balaban Publishers.
ISSN: 0334-5114

=> 6 ab

6 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d 6 ab

L7 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AB By means of genetic engineering, a full-size double-stranded DNA copy of
the STNV RNA genome was inserted into a prokaryotic expression plasmid, so
that transcription of the STNV information, starting at the PL-promoter,
can be induced. Although no Shine-Dalgarno region (bacterial
ribosome-binding site) is present in the original expression
vector, induction of transcription resulted in the synthesis of
STNV coat-protein. By analyzing the 5'-untranslated region of the STNV
genome, a shine-Dalgarno-like sequence could be found. Anal. of the
transcripts by RNA extraction, followed by Northern blotting and hybridization
with radiolabeled STNV-DNA fragments revealed that a great deal of the
transcripts terminate at or close to the 3' end of the STNV information.
Whether this phenomenon represents a transcription stop or a modification
site still remains to be solved.

=> s tobacco mosaic virus and origin of assembly

L8 46 TOBACCO MOSAIC VIRUS AND ORIGIN OF ASSEMBLY

=> dup rem l8

PROCESSING COMPLETED FOR L8

L9 26 DUP REM L8 (20 DUPLICATES REMOVED)

=> d 1-10 ti

L9 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN

TI Role of viral movement and coat proteins and RNA in phloem-dependent
movement and phloem unloading of tobamoviruses

L9 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN

TI Identification of gene function in plants by gene silencing and the use of
viral satellites to deliver silencing RNA

L9 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN

TI Replication-incompetent virus-like particles for targetted delivery of
nucleic acids or proteins

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(2005) on STN DUPLICATE 1

TI A conserved, precise RNA encapsidation pattern in tobamovirus particles.

L9 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Packaging of RNA into viral particles

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 Agricultural Library of the Department of Agriculture of the United States
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 (2005) on STN DUPLICATE 2

TI Expression of **tobacco mosaic virus** coat
 protein and assembly of pseudovirus particles in Escherichia coli.

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 Agricultural Library of the Department of Agriculture of the United States
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 (2005) on STN DUPLICATE 3

TI Uncoating of **tobacco mosaic virus** RNA in
 protoplasts.

L9 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Minimum sequence requirement for encapsidation of the cowpea strain of
tobacco mosaic virus

L9 ANSWER 9 OF 26 AGRICOLA Compiled and distributed by the National
 Agricultural Library of the Department of Agriculture of the United States
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 (2005) on STN DUPLICATE 4

TI Mutation and replacement of the 16-kDa protein gene in RNA-1 of tobacco
 rattle virus.

L9 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
 TI Study of TMV assembly with heterologous RNA containing the **origin**
-of-assembly sequence

=> d 2 pi

L9	ANSWER 2 OF 26	CAPLUS	COPYRIGHT 2005	ACS on STN	
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000063397	A2	20001026	WO 2000-EP3521	20000417
	WO 2000063397	A3	20010201		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	CA 2370515	AA	20001026	CA 2000-2370515	20000417
	EP 1173594	A2	20020123	EP 2000-922647	20000417
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	AU 775188	B2	20040722	AU 2000-42965	20000417

=> d 4 gb

'GB' IS NOT A VALID FORMAT

In a multife environment, a format can only be used if it is valid
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REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ab

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(2005) on STN

DUPLICATE 1

AB The bidirectional RNA encapsidation pathway in nine sequenced Type 1 Tobamovirus genomes will result in RNA-coat protein assembly, up to and including the first transcribed G, adjacent to the 5'-cap structure (m7 Gppp). This precision is highly conserved, despite wide interstrain variations in the absolute position of the phase-determining core of the **origin-of-assembly** sequence (Gxx)n and in overall genome length (6311-6507 nts). A Type 2 Tobamovirus genome did not comply with this pattern. All genomes had a statistically significant bias for G at every third (or 3n) position, resulting in a preponderance of GNN codons and hence a high Val, Ala, Gly, Asp, Glu content, at least in the large (126/183 kDa) and amino-coterminal replicase protein genes. Contrary to predictions from the X-ray fibre diffraction structure of **tobacco mosaic virus** (TMV, U1 strain), only one (pepper mild mottle virus) of the nine Type 1 Tobamoviruses positioned the preferred G-repeat in the most favourable (5') position of the trinucleotide binding site on each coat protein (CP) subunit. In all but one of the eight remaining Type 1 Tobamovirus genomes, G would predominate in the CP 3'-site. The significance of these observations for TMV particle assembly, disassembly and host cell interactions are discussed.

=> d 4 so

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(2005) on STN DUPLICATE 1
S0 Archives of virology, 1995. Vol. 140, No. 9. p. 1677-1685
Publisher: Wien, Austria : Springer-Verlag.
CODEN: ARVIDF; ISSN: 0304-8608

=> d 5 ab

L9 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
AB An in vivo system for expression and packaging of RNA into pseudovirus particles is described. The invention is based on the discovery that genes for plant viral coat proteins (CPs) may be efficiently expressed in E. coli, and that these coat proteins will assemble in vivo and package chimeric RNA, containing an **origin-of-assembly** (OAS) sequence, to form mature viral particles containing a foreign RNA. The present invention thus provides for packaging of RNA into a RNase-resistant form that is easily purified and stored, and which overcomes the prior art problems associated with the degradation of RNA by RNases. Significantly, the method of the invention is RNA sequence- and length-independent. The components of the invention include a source of viral coat proteins, and an expression cassette directing transcription of DNA encoding an OAS-containing transcript. The CPs and OAS are from a plant virus having a rod-shaped helical particle and a single-stranded RNA genome, most preferably **tobacco mosaic virus**

=> d 5 pi

L9	ANSWER 5 OF 26	CAPLUS	COPYRIGHT 2005	ACS on STN	
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9410329	A1	19940511	WO 1993-US10396	19931028
	W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5443969	A	19950822	US 1992-971101	19921029
	AU 9454554	A1	19940524	AU 1994-54554	19931028
	AU 693770	B2	19980709		
	EP 683821	A1	19951129	EP 1993-925119	19931028

=> d 8 ab

L9 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
AB Unavailable

=> d 8 so

L9 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
SO (1992) 121 pp. Avail.: Univ. Microfilms Int., Order No. DA9310697
From: Diss. Abstr. Int. B 1993, 53(12, Pt. 1), 6138

=> d 10 ab

L9 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
AB The assembly of **tobacco mosaic virus** (TMV)
in initiated by a specific reaction between a capsid protein oligomer and
an **origin-of-assembly** region (OAS) located 900
nucleotides from the 3' terminus of virion RNA. Packaging is then
completed by rod elongation both in the 5' and 3' directions. The
temporal order of the direction of elongation and the characteristics of
the reaction were studied by anal. of the in vitro assembly reaction
between strain U1 protein oligomers and transcripts containing a strain U1 OAS
embedded at different positions in heterologous RNA. The results confirm
that elongation in the 5' direction starts very soon after the initiation
reaction and is completed rapidly, within minutes. Packaging in the 3'
direction is slower and does not appear to commence until 5' rod formation
is complete. The reaction of strain U2 protein with the strain U1 OAS
initiates rapidly, but elongation occurs only in the 5' direction; 3'
packaging does not occur except when the OAS is at or near the 5'
terminus, in which case elongation in the 3' direction initiates without
delay with either the U1 or U2 protein. Pauses occur during elongation in
the 3' direction at an average of 320 nucleotides, indicating a packaging
periodicity of about six to eight helical turns.

=> d 10 so

L9 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
SO Virology (1990), 174(2), 337-44
CODEN: VIRLAX; ISSN: 0042-6822

=> d 11-20 ti

L9 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
TI Direct recovery of in vitro transcripts in a protected form suitable for
prolonged storage and shipment at ambient temperatures

L9 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
TI Assembly of hybrid RNAs with **tobacco mosaic**
virus coat protein. Evidence for incorporation of disks in
5'-elongation along the major RNA tail

L9 ANSWER 13 OF 26 AGRICOLA Compiled and distributed by the National
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(2005) on STN DUPLICATE 7

TI **Tobacco mosaic virus** coat protein and
reporter gene transcripts containing the TMV **origin-of-**
assembly sequence do not interact in double-transgenic tobacco
plants: implications for coat protein-mediated protection.

L9 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Hybrid RNA virus which allows encapsidation of recombinant viral sequences in heterologous protein capsids, and their use in plant genetic engineering

L9 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
 TI Selective recovery of foreign gene transcripts as virus-like particles in TMV-infected transgenic tobaccos

L9 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
 TI Selective encapsidation of CAT gene transcripts in TMV-infected transgenic tobacco inhibits CAT synthesis

L9 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Recombinant RNA packaging system using **tobacco mosaic virus**

L9 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
 TI The effect of multiple dispersed copies of the **origin-of-assembly** sequence from TMV RNA on the morphology of pseudovirus particles assembled in vitro

L9 ANSWER 19 OF 26 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 11
 TI Packaging of recombinant RNA molecules into pseudovirus particles directed by the **origin-of-assembly** sequence from **tobacco mosaic virus** RNA.

L9 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 12
 TI Addressed fragmentation of **tobacco mosaic virus** RNA: excision of the 3'-proximal region containing the coat protein gene

=> d 12 ab

L9 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
 AB During the reassembly of **tobacco mosaic virus** (TMV) RNA, with the coat protein supplied as a disk preparation, the lengths of RNA protected from nuclease are quantized with steps which correspond to incorporation of the subunits from either a single or, more commonly, both rings of a disk. This interpretation has been challenged and it was suggested that the pattern was due to special, though unspecified features of the sequence of TMV RNA. To test whether the specific sequence of TMV RNA is important during the elongation, rather than just during nucleation, growth of particles containing hybrid RNAs was followed with the TMV RNA **origin of assembly** but otherwise non-TMV sequences. RNA transcripts containing heterologous RNA 5' to the **origin of assembly** sequence from TMV RNA, i.e. with a heterologous RNA tail in place of the natural major 5'-tail and no minor tail, were prepared in vitro and used for assembly expts. In each case a banding pattern was found that was very similar to that found with native TMV RNA and with a dominant quantum step of just over 100 bases, and sometimes also a step of 50 bases, strongly suggesting that this is not due to any feature of the TMV RNA. This same repeat is also visible even with a heterologous RNA chosen because it had a sequence repeat of 135 or 136 bases, confirming that the quantization is due to a feature of the elongation reaction and in no way to the RNA sequence being encapsidated. Elongation was also followed with the **origin of assembly** located 5' to the heterologous RNA. This leads to a slower elongation along this 3'-tail, after the initial rapid encapsidation of the origin RNA, which lacks any quantization of length protected. These results are fully compatible with the hypothesis advanced earlier, that the major growth along the 5'-tail is from preformed aggregates (disks) while the minor growth along the 3'-tail is from subunits in the A-protein adding singly or a few at a time.

=> d 12 so

L9 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
SO Journal of Molecular Biology (1989), 209(3), 407-22
CODEN: JMOBAK; ISSN: 0022-2836

=> d 14 b

'B' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ab

L9 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
AB A hybrid viral RNA comprising an infectious viral sequence, a heterologous **origin of assembly** and coat protein gene (e.g. derived from a rod-shaped virion), and a heterologous sequence encoding a functional protein can be used to transfect a plant and prepare genetically altered plants. Plasmid pB3RS2, containing a full-length cDNA copy of the brome mosaic virus (BMV) RNA3 fused to the phage T7 promoter, was prepared. A 0.5 kb fragment in the middle of coat protein cDNA was removed and replaced with a 0.6 kb fragment containing coat protein-encoding cDNA of **tobacco mosaic virus** (TMV). This sequence also included the encapsidation origin of the RNA. Barley protoplasts were inoculated with transcripts of this linearized plasmid and of BMV RNA1 and RNA2 cDNAs. The infected cells produced TMV virion particles which looked normal (serol. specific electron microscopy).

=> d 14 so

L9 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW

=> d 14 pi

L9	ANSWER 14 OF 26	CAPLUS	COPYRIGHT 2005 ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 278667	A2	19880817	EP 1988-300908	19880203
	EP 278667	A3	19900905		
	EP 278667	B1	19940720		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	ES 2060646	T3	19941201	ES 1988-300908	19880203
	AU 8811383	A1	19880811	AU 1988-11383	19880208
	AU 606382	B2	19910207		
	CA 1337933	A1	19960116	CA 1988-558357	19880208
	JP 63301787	A2	19881208	JP 1988-28630	19880209
	JP 3479531	B2	20031215		
	US 5602242	A	19970211	US 1995-445990	19950522
	US 5627060	A	19970506	US 1995-473617	19950607
	US 5804439	A	19980908	US 1996-773821	19961227
	JP 2004000260	A2	20040108	JP 2003-276352	20030717

=> d 17 ab

L9 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
AB A chimeric RNA was produced which contained the **origin of assembly** sequence (responsible for packaging) of **tobacco mosaic virus** (TMV) and a sequence coding for a foreign protein. The chimeric RNA was made by producing a cDNA copy of the

origin of assembly, a cDNA for the foreign protein, ligating these 2 together in a suitable plasmid, and transcribing them in vitro. The transcripts were packaged into pseudoviral particles in an in vitro system that had a ratio of TMV coat protein to RNA of 100:1. These pseudoviruses can infect a wide variety of plant systems and even Escherichia coli and Xenopus laevis cells, expressing the foreign protein in these systems. Sequences for foreign proteins that were incorporated into the recombinant RNA packaging system were those coding for calf prepropchymosin, chicken lysozyme, X. borealis rRNA, and transposon Tn9 chloramphenicol acetyltransferase.

=> d 17 so

L9 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
 SO PCT Int. Appl., 36 pp.
 CODEN: PIXXD2

=> d 17 pi

L9	ANSWER 17 OF 26	CAPLUS	COPYRIGHT 2005 ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 8706261	A1	19871022	WO 1987-GB249	19870413
	W: GB, JP, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				

=> d 19 ab

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 (2005) on STN DUPLICATE 11

=> d 19 so

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 (2005) on STN DUPLICATE 11
 SO Virology, Dec 1986. Vol. 155, No. 2. p. 299-308 ill
 Publisher: Duluth, Minn. : Academic Press.
 CODEN: VIRLAX; ISSN: 0042-6822

=> d 21-26 tui

'TUI' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L9 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 13
 TI **Tobacco mosaic virus** induces the synthesis
 of a family of 3'-coterminial messenger RNAs and their complements

L9 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 14
 TI A study of TMV ts mutant Ni2519. III. Location of the reconstitution initiation sites on Ni2519 RNA

L9 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Location of reconstitution initiation sites of the **tobacco mosaic virus** mutant Ni2519 RNA

L9 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
TI The nucleotide sequence at the **origin** for **assembly** on
tobacco mosaic virus RNA

L9 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
TI Location of the origin for viral reassembly on **tobacco**
mosaic virus RNA and its relation to stable fragment

L9 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
TI **Tobacco mosaic virus** assembly - specificity
and the transition in protein structure during RNA packaging

=> d 24 ab

L9 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
AB RNA extracted from **tobacco mosaic virus** (TMV)
assembly nucleation complexes consists of a population of fragments 50-550
nucleotides in length. The shortest fragments define a core .apprx.100
residues long common to all the fragments, whereas larger ones are
covalently extended by ≤ 400 nucleotides in 1 direction and
 ≤ 30 in the other. The most probable interpretation is that
assembly nucleates at a unique internal site on the RNA, with growth
following bidirectionally but at greatly unequal rates. A nucleotide
sequence of 149 residues around the assembly origin was determined. The
sequencing data are consistent only with a 3' to 5' major direction of
growth. Unusual features occur both within the sequence of the 1st disk
binding site and elsewhere in the nucleation region; these may be involved
in directing the binding and(or) dislocation of ≤ 3 coat protein
disks. The nucleotide sequence around the assembly origin is homologous
to, but distinct from, part of the nucleotide sequence from the TMV coat
protein gene. The assembly origin may itself have a dual role as a coding
region within another gene. There is striking clustering of nucleotide
residues that show homol. between the assembly origin and the coat protein
gene in those regions coding (in the coat gene) for conserved amino acids,
although the protein sequences that may be translated from the 2 genes are
dissimilar.

=> d 24 so

L9 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
SO Cell (Cambridge, MA, United States) (1977), 11(3), 463-82
CODEN: CELLB5; ISSN: 0092-8674

=> dis his

(FILE 'HOME' ENTERED AT 13:49:09 ON 08 MAR 2005)

FILE 'STNGUIDE' ENTERED AT 13:49:13 ON 08 MAR 2005

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 13:49:34 ON 08 MAR 2005

L1 137 S SATELLITE TOBACCO MOSAIC VIRUS
L2 0 S L1 AND ORIGIN OF ASSEMBLY
L3 37 S L1 AND COAT PROTEIN
L4 18 DUP REM L3 (19 DUPLICATES REMOVED)
L5 316 S SATELLITE TOBACCO NECROSIS VIRUS
L6 14 S L5 AND VECTOR
L7 9 DUP REM L6 (5 DUPLICATES REMOVED)
L8 46 S TOBACCO MOSAIC VIRUS AND ORIGIN OF ASSEMBLY
L9 26 DUP REM L8 (20 DUPLICATES REMOVED)

=> s l1 and (antisense or silenc?)
L10 4 L1 AND (ANTISENSE OR SILENC?)

=> dup rem l10
PROCESSING COMPLETED FOR L10

=> d 1-2 ti

L11 ANSWER 1 OF 2 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 1

TI SVISS--a novel transient gene **silencing** system for gene function discovery and validation in tobacco plants.

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

TI Recombinant expression system based on **satellite tobacco mosaic virus**

=> d ab

L11 ANSWER 1 OF 2 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 1

AB We developed a novel, two-component transient gene **silencing** system in which the **satellite tobacco mosaic virus** (STMV) is used as vector for the delivery of inhibitory RNA into tobacco plants and the tobacco mosaic virus strain U2 (TMV-U2) is used as helper virus for supplying replication and movement proteins in trans. The main advantage of the system is that by uncoupling virus replication components from **silencing** induction components, the intensity of **silencing** becomes more pronounced. We call this system satellite virus-induced **silencing** system (SVISS) and will demonstrate here its robustness, speed and effectiveness. We were able to obtain pronounced and severe knockout phenotypes for a range of targeted endogenous genes belonging to various biochemical pathways and expressed in different plant tissues, such as genes involved in leaf and flower pigmentation, genes for cell wall synthesis in leaf, stem and root tissues or a ubiquitous RNA polymerase gene. By tandem insertion of more than one target gene sequence into the vector, we were able to induce simultaneous knockouts of an endogenous gene and a transgene. SVISS is the first transient gene **silencing** system for *Nicotiana tabacum*, which is a genetically well-characterized bridging species for the Solanaceae plant family.

=> d so

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(2005) on STN DUPLICATE 1

SO The Plant journal : for cell and molecular biology, Dec 2002. Vol. 32, No. 5. p. 859-866
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0960-7412

=> d 2 so

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2

=> d 2 pi

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

PI WO 9012107 A1 19901018 WO 1990-US1738 19900402

W: CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE

=> d 2 ab

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

AB A cDNA encoding a full-length copy of the RNA genome of **satellite tobacco mosaic virus** is cloned and characterized for use as a transformation vector for plants. The virus is systemic and needs a helper virus for replication and so can be used to introduce foreign DNA into a plant without being pathogenic. The genome was cloned as a cDNA by standard methods using defined oligonucleotide primers. The RNA was shown by in vitro translation to encode two peptides of mol. weight 6,800 and 17,500. A series of plasmid derivs. containing modified cDNAs were constructed and transcripts from these used in infectivity studies on tobacco plants with tobacco mosaic virus isolates as helpers. The transcripts tested produced infected plants and virions were recovered from these plants. **Antisense** transcripts were not infective.

=> s l5 and (antisense or silenc?)

L12 1 L5 AND (ANTISENSE OR SILENC?)

=> d ti

L12 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Different 5' leader sequences modulate beta-glucuronidase accumulation levels in transgenic *Nicotiana tabacum* plants.

=> s (l1 or l5) and (co-suppression or cosuppression)

L13 0 (L1 OR L5) AND (CO-SUPPRESSION OR COSUPPRESSION)

=> s ((meulewaeter, f?) or (meulewaeter f?))/au

L14 39 ((MEULEWAETER, F?) OR (MEULEWAETER F?))/AU

=> s l14 and (satellite tobacco mosaic virus or satellite tobacco necrosis virus).

L15 18 L14 AND (SATELLITE TOBACCO MOSAIC VIRUS OR SATELLITE TOBACCO NECROSIS VIRUS)

=> dup rem l15

PROCESSING COMPLETED FOR L15

L16 9 DUP REM L15 (9 DUPLICATES REMOVED)

=> d 1-9 ti

L16 ANSWER 1 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1

TI SVISS--a novel transient gene silencing system for gene function discovery and validation in tobacco plants.

L16 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI The 5' and 3' extremities of the **satellite tobacco necrosis virus** translational enhancer domain contribute differentially to stimulation of translation

L16 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

TI Functionality of the STNV translational enhancer domain correlates with affinity for two wheat germ factors

L16 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

TI Features of the autonomous function of the translational enhancer domain of **satellite tobacco necrosis virus**

L16 ANSWER 5 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 5

TI 5'- and 3'-sequences of **satellite tobacco necrosis virus** RNA promoting translation in tobacco.

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TI Expression of tobacco necrosis virus open reading frames 1 and 2 is sufficient for the replication of satellite necrosis virus.

L16 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7

TI The 3' untranslated region of **satellite tobacco necrosis virus** RNA stimulates translation in vitro

L16 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Specificity of satellite activation by tobacco necrosis virus correlates with nucleic acid hybridization pattern between helper virus isolates

L16 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI GENOME STRUCTURE OF TOBACCO NECROSIS VIRUS STRAIN A.

=> d so

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SO The Plant journal : for cell and molecular biology, Dec 2002. Vol. 32, No. 5. p. 859-866
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0960-7412

=> d ab

L16 ANSWER 1 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1

AB We developed a novel, two-component transient gene silencing system in which the **satellite tobacco mosaic virus** (STMV) is used as vector for the delivery of inhibitory RNA into tobacco plants and the tobacco mosaic virus strain U2 (TMV-U2) is used as helper virus for supplying replication and movement proteins in trans. The main advantage of the system is that by uncoupling virus replication components from silencing induction components, the intensity of silencing becomes more pronounced. We call this system satellite virus-induced silencing system (SVISS) and will demonstrate here its robustness, speed and effectiveness. We were able to obtain pronounced and severe knockout phenotypes for a range of targeted endogenous genes belonging to various biochemical pathways and expressed in different plant tissues, such as genes involved in leaf and flower pigmentation, genes for cell wall synthesis in leaf, stem and root tissues or a ubiquitous RNA polymerase gene. By tandem insertion of more than one target gene sequence into the vector, we were able to induce simultaneous knockouts of an endogenous gene and a transgene. SVISS is the first transient gene silencing system for *Nicotiana tabacum*, which is a genetically well-characterized bridging species for the Solanaceae plant family.

=> s ((cornelissen m?) or (cornelissen, m?))/au

L17 303 ((CORNELISSEN M?) OR (CORNELISSEN, M?))/AU

=> s l17 and (satellite tobacco mosaic virus or satellite tobacco necrosis virus)
L18 17 L17 AND (SATELLITE TOBACCO MOSAIC VIRUS OR SATELLITE TOBACCO
NECROSIS VIRUS)

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19 7 DUP REM L18 (10 DUPLICATES REMOVED)

=> d 1-7 ti

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(2005) on STN DUPLICATE 1

TI SVISS--a novel transient gene silencing system for gene function discovery
and validation in tobacco plants.

L19 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI The 5' and 3' extremities of the **satellite tobacco
necrosis virus** translational enhancer domain contribute
differentially to stimulation of translation

L19 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

TI Functionality of the STNV translational enhancer domain correlates with
affinity for two wheat germ factors

L19 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

TI Features of the autonomous function of the translational enhancer domain
of **satellite tobacco necrosis virus**

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(2005) on STN DUPLICATE 5

TI 5'- and 3'-sequences of **satellite tobacco
necrosis virus** RNA promoting translation in tobacco.

L19 ANSWER 6 OF 7 AGRICOLA Compiled and distributed by the National
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(2005) on STN DUPLICATE 6

TI Expression of tobacco necrosis virus open reading frames 1 and 2 is
sufficient for the replication of satellite necrosis virus.

L19 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7

TI The 3' untranslated region of **satellite tobacco
necrosis virus** RNA stimulates translation in vitro

=> d 5 ab

L19 ANSWER 5 OF 7 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
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(2005) on STN DUPLICATE 5

AB The RNA of **satellite tobacco necrosis
virus** (STNV) is a monocistronic messenger that lacks both a 5' cap
and a 3' poly(A) tail. The STNV trailer contains an autonomous
translational enhancer domain (TED) that promotes translation in vitro by
more than one order of magnitude when combined with the 5'-terminal 173 nt
of STNV RNA. We now show that the responsible sequence within the 5'
region maps to the first 38 nt of the STNV RNA. Mutational analysis
indicated that the primary sequence of the STNV 5' 38 nt and TED is
important for translation stimulation in vitro, but did not reveal a role
for the complementarity between the two. Translation of chimeric STNV-cat
RNAs in tobacco protoplasts showed that TED promotes translation in vivo
of RNAs lacking a cap and/or a poly(A) tail. Similar to in vitro,
TED-dependent translation in tobacco was stimulated further by the STNV 5'

38 nt.

=> d 5 so

L19 ANSWER 5 OF 7 AGRICOLA Compiled and distributed by the National
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(2005) on STN DUPLICATE 5

S0 The Plant journal : for cell and molecular biology, Apr 1998. Vol. 14, No.
2. p. 169-176
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0960-7412

=> s ((jacobs, j?) or (jacobs j))/au
L20 3168 ((JACOBS, J?) OR (JACOBS J))/AU

=> s l20 and (satellite tobacco mosaic virus or satellite tobacco necrosis virus)
L21 0 L20 AND (SATELLITE TOBACCO MOSAIC VIRUS OR SATELLITE TOBACCO
NECROSIS VIRUS)

=> s ((van eldik, g?) or (van eldik g?))/au
L22 36 ((VAN ELDIK, G?) OR (VAN ELDIK G?))/AU

=> s l22 and (satellite tobacco mosaic virus or satellite tobacco necrosis virus)
L23 0 L22 AND (SATELLITE TOBACCO MOSAIC VIRUS OR SATELLITE TOBACCO
NECROSIS VIRUS)

=> s ((metzlaff, m?) or (metzlaff m?))/au
L24 95 ((METZLAFF, M?) OR (METZLAFF M?))/AU

=> s l24 and (satellite tobacco mosaic virus or satellite tobacco necrosis virus)
L25 3 L24 AND (SATELLITE TOBACCO MOSAIC VIRUS OR SATELLITE TOBACCO
NECROSIS VIRUS)

=> dup rem l25
PROCESSING COMPLETED FOR L25
L26 1 DUP REM L25 (2 DUPLICATES REMOVED)

=> d ti

L26 ANSWER 1 OF 1 AGRICOLA Compiled and distributed by the National
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(2005) on STN DUPLICATE 1

TI SVISS--a novel transient gene silencing system for gene function discovery
and validation in tobacco plants.